

*Bally*

MARCH 1995  
16-10041

# THEATRE OF MAGIC™



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## Operators Handbook

Midway Manufacturing Company, 3401 North California Avenue, Chicago, Illinois 60618

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## MENU SYSTEM OPERATION

The Main Menu allows you to choose from several categories, which in turn lead to other menus. To access the Main Menu, open the coin door and press the Begin Test button, then press the Enter button. Press the Up or Down buttons to cycle through the Main Menu. Press the Enter button to access a menu. Press the Escape button to return to the Main Menu. Press the Start button for HELP at any time.

### Main Menu

#### B. Bookkeeping Menu

B.1 Main Audits
B.2 Earnings Audits
B.3 Standard Audits
B.4 Feature Audits
B.5 Histograms
B.6 Time-Stamps

#### P. Printouts Menu

P.1 Earnings Data
P.2 Main Audits
P.3 Standard Audits
P.4 Feature Audits
P.5 Score Histograms
P.6 Game Time Histograms
P.7 Time-Stamps
P.8 All Data

#### T. Test Menu

T.1 Switch Edges
T.2 Switch Levels
T.3 Single Switches
T.4 Solenoid Test
T.5 Flasher Test
T.6 General Illumination
T.7 Sound & Music Test
T.8 Single Lamps
T.9 All Lamps
T.10 Lamp & Flasher Test
T.11 Display Test
T.12 Flipper Test
T.13 Ordered Lamp Test
T.14 Lamp Row-Col Test
T.15 Dip Switch Test
T.16 Trunk Test
T.17 Trapdoor Test
T.18 Empty Balls Test

#### U. Utilities Menu

U.1 Clear Audits
U.2 Clear Coins
U.3 Reset H.S.T.D.
U.4 Set Time & Date
U.5 Custom Message
U.6 Set Game I.D.
U.7 Factory Adjustments
U.8 Factory Resets
U.9 Presets
U.10 Clear Credits
U.11 Auto Burn-In

#### A. Adjustments Menu

A.1 Standard Adjustments
A.2 Feature Adjustments
A.3 Pricing Adjustments
A.4 H.S.T.D. Adjustments
A.5 Printer Adjustments

#### Press Escape

To move out of a menu selection.

#### Press Enter

To get into a menu selection.

#### Press Up

Increases sequence; Example A.1, A.2, A.3, A.4.

#### Press Down

Decreases Sequence; Example A.4, A.3, A.2, A.1.

Use Up and Down to cycle through the selections in a menu.

Use Escape and Enter to move into and out of the selected menu

# LAMP MATRIX

Yellow (B+) 0 Red

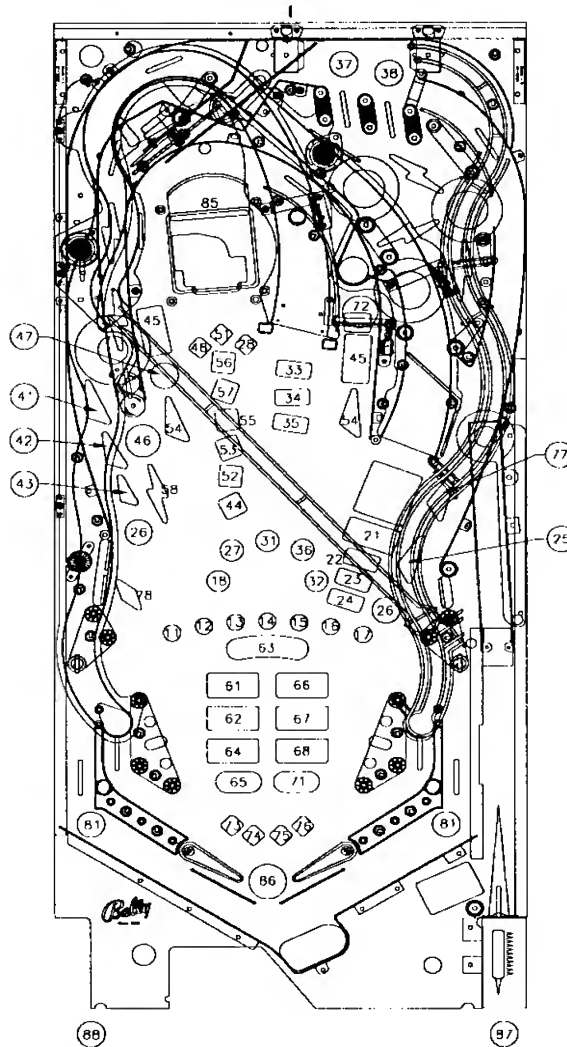
Column Row	1 Yellow-Brown J137-1 Q98	2 Yellow-Red J137-2 Q97	3 Yellow-Orange J137-3 Q96	4 Yellow-Black J137-4 Q95	5 Yellow-Green J137-5 Q94	6 Yellow-Blue J137-6 Q93	7 Yellow-Violet J138-7 Q92	8 Yellow-Gray J138-9 Q91
1 Red-Brown J133-1 Q90	(T)HEATRE 11	HAUNTED BASEMENT 21	MA(G)IC 31	EXTRA BALL 41	TRUNK HIT 2 51	TIGER SAW 61	HAT MAGIC 71	SPECIAL 81
2 Red-Black J133-2 Q89	T(H)EATRE 12	META-MORPHISIS AWARD 22	MAG(I)C 32	VANISH 42	HURRY UP 52	LEVITATE WOMAN 62	SPIRIT AWARD 72	NOT USED 82
3 Red-Orange J133-4 Q88	TH(E)ATRE 13	RIGHT SPELL MAGIC 23	LIFT TRAPDOOR 33	SPELL THEATRE 43	TRUNK ESCAPE 53	GRAND FINALE 63	THEATRE 73	NOT USED 83
4 Red-Yellow J133-5 Q87	THE(A)TRE 14	SPIRIT RING 24	CENTER SPELL MAGIC 34	JACKPOT 44	LOCK BALL 54	TRUNK ESCAPE 64	MULTI-BALL 74	NOT USED 84
5 Red-Green J133-6 Q86	THEA(T)RE 15	ADVANCE CLOCK 25	LEVITATE AWARD 35	SAFE AWARD 45	HAT TRICK AWARD 55	SPIRIT CARDS 65	MIDNIGHT 75	LAMP IN CUBE 85
6 Red-Blue J133-7 Q85	THEAT(R)E 16	JACKET AWARD 26	MAG(I)C 36	TIGER SAW AWARD 46	START ILLUSION 56	SAFE ESCAPE 66	ILLUSIONS 76	SHOOT AGAIN 86
7 Red-Violet J133-8 Q84	THEATR(E) 17	M(A)GIC 27	TOP ROLLOVER 1 37	START FINALE 47	START MULTI-BALL 57	META-MORPHISIS 67	SAW MULTI-BALL 77	BUY-IN 87
8 Red-Gray J133-9 Q83	(M)AGIC 18	TRUNK HIT 3 28	TOP ROLLOVER 2 38	TRUNK HIT 1 48	LITE VANISH 58	STRAIT JACKET 68	HOCUS POCUS 78	START BUTTON 88

J1XX = Power Driver Board

Item No.	Bulb No.	Lamp Assy. No.	Description
11	24-8768	A-19982	(T)HEATRE
12	24-8768	A-19982	T(H)EATRE
13	24-8768	A-19982	TH(E)ATRE
14	24-8768	A-19982	THE(A)TRE
15	24-8768	A-19982	THEA(T)RE
16	24-8768	A-19982	THEAT(R)E
17	24-8768	A-19982	THEATR(E)
18	24-8768	A-19982	(M)AGIC
21	24-8768	A-19982	Haunted Basement
22	24-8768	A-19982	Metamorphosis Award
23	24-8768	A-19982	Right Spell Magic
24	24-8768	A-19982	Spirit Ring
25	24-8768	A-19982	Advance Clock
26	24-8768	A-19983	Jacket Award (2)
27	24-8768	A-19982	M(A)GIC
28	24-6549	A-17836	Trunk Hit 3
31	24-8768	A-19982	MA(G)IC
32	24-8768	A-19982	MAG(I)C
33	24-8768	A-19984	Lift Trapdoor
34	24-8768	A-19984	Center Spell Magic

Item No.	Bulb No.	Lamp Assy. No.	Description
35	24-8768	A-19984	Levitare Award
36	24-8768	A-19982	MAG(I)C
37	24-6549	A-17835	Top Rollover 1
38	24-6549	A-17835	Top Rollover 2
41	24-8768	A-19983	Extra Ball
42	24-8768	A-19983	Vanish
43	24-8768	A-19983	Spell Theatre
44	24-8768	A-19983	Jackpot
45	24-8768	A-19983	Safe Award (2)
46	24-8768	A-19983	Tiger Saw Award
47	24-8768	A-19983	Start Finale
48	24-8768	A-19983	Trunk Hit 1
51	24-8768	A-19983	Trunk Hit 2
52	24-8768	A-19983	Hurry Up
53	24-8768	A-19983	Trunk Escape
54	24-8768	A-19983	Lock Ball (2)
55	24-8768	A-19984	Lite Vanish
55	24-8768	A-19983	Hat Trick Award
56	24-8768	A-19983	Start Illusion
57	24-8768	A-19983	Start Multi-Ball
58	24-8768	A-19983	Lite Vanish

## LAMP LOCATIONS



Item No.	Bulb No.	Lamp Assy. No.	Description
61	24-8768	A-19981	Tiger Saw
62	24-8768	A-19981	Levitate Woman
63	24-8768	A-19981	Grand Finale (2)
64	24-8768	A-19981	Trunk Escape
65	24-8768	A-19981	Spirit Cards
66	24-8768	A-19981	Safe Escape
67	24-8768	A-19981	Metamorphosis
68	24-8768	A-19981	Strait Jacket
71	24-8768	A-19981	Hat Magic
72	24-8768	A-19984	Spirit Award
73	24-8768	A-19981	Theatre
74	24-8768	A-19981	Multi-Ball
75	24-8768	A-19981	Midnight

Item No.	Bulb No.	Lamp Assy. No.	Description
76	24-8768	A-19981	Illusions
77	24-6549	A-17807	Saw Multi-Ball
78	24-6549	A-17835	Hocus Pocus
81	24-6549	A-17835	Special (2)
82	---	---	Not Used
83	---	---	Not Used
84	---	---	Not Used
85	24-8768	A-17826	Lamp in Cube
86	24-6549	A-17807	Shoot Again
87	20-9663-18	---	Buy-In
88	20-9663-1	---	Start Button
24-8768 = #555 Bulb			
24-6549 = #44 Bulb			


## SWITCH MATRIX

SWITCH MATRIX

White

Green

Dedicated Grounded Switches	Column	1 Green-Brown J207-1 U20-18	2 Green-Red J207-2 U20-17	3 Green-Orange J207-3 U20-16	4 Green-Yellow J207-4 U20-15	5 Green-Black J207-5 U20-14	6 Green-Blue J207-6 U20-13	7 Green-Violet J207-7 U20-12	8 Green-Gray J207-9 U20-11	Flipper Grounded Switches	
	Row										
Orange-Brown (1) J205-1 Left Coin Chute D1	1	White-Brown J209-1 U18-11	NOT USED	SLAM TLT	TROUGH JAM	LOCK 1	LEFT BANK TARGET	LEFT SLING	CENTER RAMP EXIT	LOOP RIGHT	Black-Green J906-1 Right Flipper EOS F1
Orange-Red (2) J205-2 Center Coin Chute D2	2	White-Red J209-2 U18-9	NOT USED	COIN DOOR CLOSED	TROUGH 1	LOCK 2	CAPTIVE BALL REST	RIGHT SLING	NOT USED	CENTER RAMP TARGETS	Black-Violet J905-1 Right Flipper Opto F2
Orange-Black (3) J205-3 Right Coin Chute D3	3	White-Orange J209-3 U18-5	START BUTTON	BUY-IN	TROUGH 2	LOCK 3	RIGHT LANE ENTER	BOTTOM JET	RIGHT RAMP EXIT	VANISH LOCK 1	Black-Blue J906-3 Left Flipper EOS F3
Orange-Yellow (4) J205-4 4th Coin Chute D4	4	White-Yellow J209-4 U18-7	PLUMB BOB TILT	ALWAYS CLOSED	TROUGH 3	POPPER	LEFT LANE ENTER	MIDDLE JET	RIGHT RAMP EXIT 2	VANISH LOCK 2	Black-Gray J905-2 Left Flipper Opto F4
Orange-Green (5) J205-6 Normal Function Ser Credits Test Function Esc D6	5	White-Green J209-5 U19-11	SHOOTER LANE	LEFT OUTLANE	TROUGH 4	LEFT DRAIN EDDY	CUBE POSITION 4	TOP JET	CENTER RAMP ENTER	TRUNK HIT	Black-Violet J906-4 Upper Right Flipper EOS F5
Orange-Blue (6) J205-7 Normal Function Vol Down Test Function Down D6	6	White-Blue J209-7 U19-9	NOT USED	LEFT RETURN LANE	SUBWAY OPTO	NOT USED	CUBE POSITION 1	TOP LANE 1	RIGHT RAMP ENTER	RIGHT LANE EXIT	Black-Yellow J905-3 Upper Right Flipper Opto F6
Orange-Violet (7) J205-8 Normal Function Vol Up Test Function Up D7	7	White-Violet J209-8 U19-5	NOT USED	RIGHT RETURN LANE	SPINNER	SUBWAY MICRO	CUBE POSITION 2	TOP LANE 2	CAPTIVE BALL TOP	LEFT LANE EXIT	Black-Gray J906-5 Upper Left Flipper EOS F7
Orange-Gray (8) J205-9 Normal Function Begin Test Test Function Enter D8	8	White-Gray J209-9 U19-7	NOT USED	RIGHT OUTLANE	RIGHT LOWER TARGET	RIGHT DRAIN EDDY	CUBE POSITION 3	NOT USED	LOOP LEFT	NOT USED	Black-Blue J905-5 Upper Left Flipper Opto F8

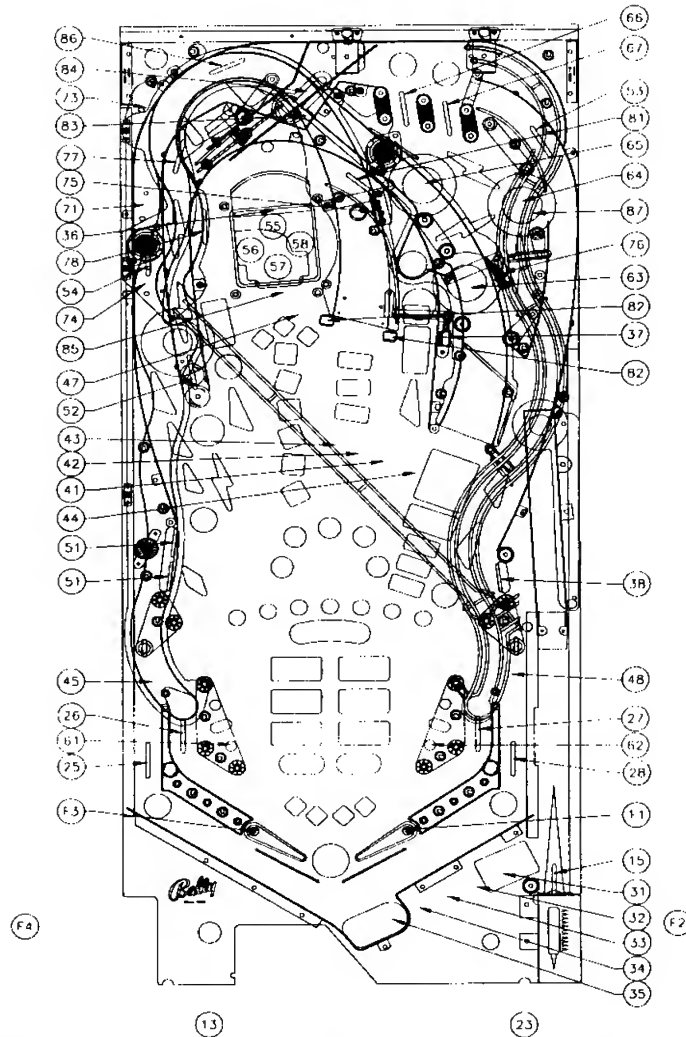
J2XX = CPU Board; J9XX = Fliptronic II Board;  = Opto, Typically Closed

## SWITCH LOCATIONS

Item No.	Switch Part No.	Description	Item No.	Switch Part No.	Description
F1	SW-1A-194	Lower Right Flipper EOS	31	A-18617-1	Trough JAM (LED)
F2	A-17316	*Lower Right Flipper Cabinet		A-18618-1	(Trans)
F3	SW-1A-194	Lower Left Flipper EOS	32	A-18617-1	Trough 1 (LED)
F4	A-17316	*Lower Left Flipper Cabinet		A-18618-1	(Trans)
F5	---	Not Used	33	A-18617-1	Trough 2 (LED)
F6	---	Not Used		A-18618-1	(Trans)
F7	---	Not Used	34	A-18617-1	Trough 3 (LED)
F8	---	Not Used		A-18618-1	(Trans)
11	---	Not Used	35	A-18617-1	Trough 4 (LED)
12	---	Not Used		A-18618-1	(Trans)
13	20-9663-1	Start Button	36	A-16908	Subway Opto (LED)
14	A-15361	*Plumb Bob Tilt		A-16909	(Trans)
15	5647-12693-32	Shooter Lane	37	5647-12693-24	Spinner
16	---	Not Used	38	A-17799-6	Right Lower Target
17	---	Not Used	41	5647-12693-34	Lock 1
18	---	Not Used	42	5647-12693-33	Lock 2
21	A-17238	*Slam Tilt	43	5647-12693-32	Lock 3
22	5643-09288-00	*Coin Door Closed	44	5647-12693-11	Popper
23	20-9663-18	Buy-In	45	A-18543-1	Left Drain Eddy
24	5643-09112-00	*Always Closed	46	---	Not Used
25	5647-12693-19	Left Outlane	47	5647-12693-13	Subway Micro
26	5647-12693-19	Left Return Lane	48	A-18543-1	Right Drain Eddy
27	5647-12693-19	Right Return Lane			
28	5647-12693-19	Right Outlane			

\*Not Shown

## SWITCH LOCATIONS (continued)



Item No.	Switch Part No.	Description
51	A-18059-15	Left Bank Target (2)
52	5647-12693-19	Captive Ball Rest
53	5647-12693-19	Right Lane Enter
54	5647-12693-19	Left Lane Enter
55	A-19749	Cube Position 4
56	A-19749	Cube Position 1
57	A-19749	Cube Position 2
58	A-19749	Cube Position 3
61	SW-1A-114	Left Sling (kicker)
	SW-1A-120	(score)
62	SW-1A-114	Right Sling(kicker)
	SW-1A-120	(score)
63	SW-11A-37	Bottom Jet
64	SW-11A-37	Middle Jet
65	SW-11A-37	Top Jet
66	5647-12693-19	Top Lane 1
67	5647-12693-19	Top Lane 2
68	---	Not Used

\*Not Shown

Item No.	Switch Part No.	Description
71	5647-12693-13	Center Ramp Exit
72	---	Not Used
73	5647-12693-13	Right Ramp Exit
74	5647-12693-13	Right Ramp Exit 2
75	5647-12693-11	Center Ramp Enter
76	5647-12693-11	Right Ramp Enter
77	5647-12693-19	Captive Ball Top
78	5647-12693-19	Loop Left
81	5647-12693-19	Loop Right
82	A-20014-5	Center Ramp Targets (2)
83	5647-12133-11	Vanish Lock 1
84	5647-12133-12	Vanish Lock 2
85	A-18543-2	Trunk Hit
86	5647-12693-19	Right Lane Exit
87	5647-12693-13	Left Lane Exit
88	---	Not Used

## SOLENOID/FLASHER TABLE

Sol. No.	Function	Solenoid Type	Voltage Connections			Drive Xister	Drive Connections			Drive Wire Color	Solenoid Part number	
			Playfield	Backbox	Cabinet		Playfield	Backbox	Cabinet		Flashlamp Type	Backbox
01	BALL TROUGH	High Power	J107-2			Q82	J130-1			Vio-Brn	AE-26-1500	
02	MAGNET DIVERter	High Power	J107-2			Q80	J130-2			Vio-Red	20-10179	
03	TRAP DOOR UP	High Power	J107-2			Q78	J130-4			Vio-Org	A-20099	
04	SUBWAY POPPER	High Power	J107-2			Q76	J130-5			Vio-Yel	AE-26-1200	
05	RIGHT DRAIN MAGNET	High Power	J107-2			Q64	J130-6			Vio-Grn	20-10197	
06	CENTER LOOP POST	High Power	J107-2			Q66	J130-7			Vio-Blu	AE-27-1200	
07	KNOCKER	High Power		J107-2		Q68		J130-8		Vio-Blk		AE-23-800
08	TOP DIVERter POST	High Power	J107-2			Q70	J130-9			Vio-Gry	AE-27-1200	
09	LEFT SLING	Low Power	J107-3			Q58	J127-1			Brn-Blk	AE-27-1200	
10	RIGHT SLING	Low Power	J107-3			Q56	J127-3			Brn-Red	AE-27-1200	
11	BOTTOM JET	Low Power	J107-3			Q54	J127-4			Brn-Org	AE-26-1200	
12	MIDDLE JET	Low Power	J107-3			Q52	J127-5			Brn-Yel	AE-26-1200	
13	TOP JET	Low Power	J107-3			Q50	J127-6			Brn-Grn	AE-26-1200	
14	TRAP DOOR HOLD	Low Power	J107-2			Q48	J127-7			Brn-Blu	A-20099	
15	LEFT UP/DOWN GATE	Low Power	J107-3			Q46	J127-8			Brn-Vio	A-14406	
16	RIGHT UP/DOWN GATE	Low Power	J107-3			Q44	J127-9			Brn-Gry	A-14406	
17	BOX CLOCKWISE	Flasher	J116-2			Q42	J126-1			Blk-Brn	14-8018	
18	BOX COUNTER CLOCKWISE	Flasher	J116-2			Q40	J126-2			Blk-Red	14-8018	
19	NOT USED	Flasher	J116-2			Q38	J126-3			Blk-Org	---	
20	RETURN LANE FLASHER	Flasher	J107-6			Q36	J126-4			Blk-Yel	#89 (2)	
21	TOP KICKOUT	Flasher	J107-1			Q28	*J126-5			Blu-Grn	AE-27-1200	
22	NOT USED	Flasher	J107-6			Q30	J126-6			Blu-Blk	---	
23	NOT USED	Flasher	J107-6			Q34	J126-7			Blu-Vio	---	
24	TRAP DOOR FLASHER	Flasher	J107-6			Q32	J126-8			Blu-Gry	#89 (2)	
25	SPIRIT RING FLASHER	Gen. Purpose	J107-6	J106-5		Q26	J122-1	J124-1		Blu-Brn	#906, #89	#906
26	SAW FLASHER	Gen. Purpose	J107-6	J106-5		Q24	J122-2	J124-2		Blu-Red	#906, #89 (2)	#906
27	JET FLASHER	Gen. Purpose	J107-6	J106-5		Q22	J122-3	J124-3		Blu-Org	#906, #89 (2)	#906
28	BOX FLASHER	Gen. Purpose	J107-6	J106-5		Q20	J122-4	J124-5		Blu-Yel	#906, #89 (2)	#906
33	CUBE MAGNET	High Power	J907-6,7			Q2	J902-6			Yel-Vio	20-10197	
34	SUB BALL RELEASE	Low Power	J907-6,7			Q7	J902-4			Org-Vio	AE-27-1200	
35	LEFT DRAIN MAGNET	High Power	J907-8,9			Q1	J902-3			Yel-Gry	20-10197	
General Illumination												
01	STRING 1	G.I.		J120-1		Q18		J120-7		Wht-Brn		#555
02	STRING 2	G.I.		J120-2		Q10		J120-8		Wht-Org		#555
03	STRING 3	G.I.	J121-3			Q14	J121-9			Wht-Yel	#44	
04	STRING 4	G.I.	J121-5			Q16	J121-10			Wht-Grn	#44	
05	STRING 5	G.I.	J121-6			Q12	J121-11			Wht-Vio	#44	
Flipper Circuits												
			Voltage Connections		Drive Transistors		Drive Connectors		Drive Wire Colors		Coil Part No.	Coil Color
			Playfield		Power	Hold	Playfield		Power	Hold		
29		Lwr. Rt. Power	J907-1 (Red-Grn)		Q4		J902-13		Yel-Grn			
30	Lower Right Flipper	Lwr. Rt. Hold	J907-1 (Red-Grn)			Q11	J902-11		Org-Grn		FL-11629	BLUE
31		Lwr. Lt. Power	J907-4 (Red-Blu)		Q3		J902-9		Yel-Blu			
32	Lower Left Flipper	Lwr. Lt. Hold	J907-4 (Red-Blu)			Q9	J902-7		Org-Blu		FL-11629	BLUE
33		Upr. Rt. Power	J907-6 (Red-Vio)		Q2		J902-6		Yel-Vio			
34	Upper Right Flipper	Upr. Rt. Hold	J907-6 (Red-Vio)			Q7	J902-4		Org-Vio		NOT	USED
35		Upr. Lt. Power	J907-8 (Red-Gry)		Q1		J902-3		Yel-Gry			
36	Upper Left Flipper	Upr. Lt. Hold	J907-8 (Red-Gry)			Q5	J902-1		Org-Gry		NOT	USED

J1xx=Power Driver Board; J9xx=Flitronic II Board; 24-6549=#44 bulb; 24-8704=#89 bulb; 24-8768=#555 bulb; 24-8802=#906 bulb

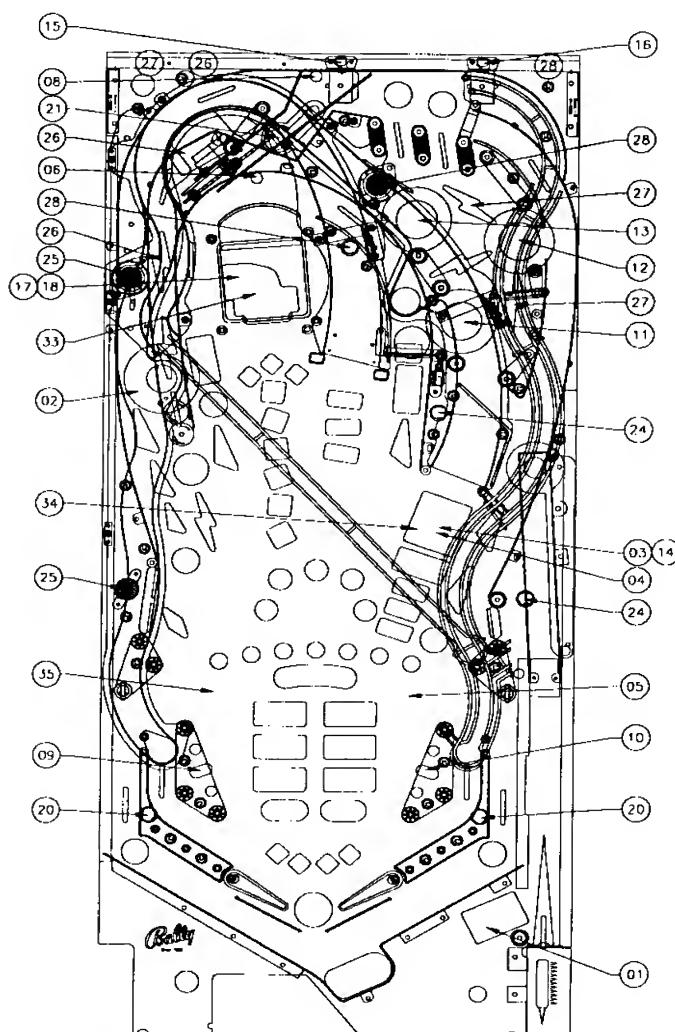
\*Tieback Diode J126-13

## SOLENOID/FLASHER LOCATIONS

Item No.	Coil/ Flasher No.	Assy. Number.	Description	Item No.	Coil/ Flasher No.	Assy. Number.	Description
01	AE-26-1500	A-19963	Ball Trough	12	AE-26-1200	A-9415-2	Middle Jet
02	20-10179	A-19778	Magnet Diverter	13	AE-26-1200	A-9415-2	Top Jet
03	A-20099	A-19939	Trap Door Up	14	A-20099	A-19939	Trap Door Hold
04	AE-26-1200	A-19939	Subway Popper	15	A-14406	A-17796	Left Up/Down Gate
05	20-10197	---	Right Drain Magnet	16	A-14406	A-17796	Right Up/Down Gate
06	AE-27-1200	A-17932	Center Loop Post	17	14-8018	A-19782	Box Clockwise
07	AE-23-800	B-10686-1	*Knocker	18	14-8018	A-19782	Box Counter Clockwise
08	AE-27-1200	A-17932	Top Diverter Post	19	---	---	Not Used
09	AE-27-1200	B-9362-L-3	Left Sling	20	24-8704	A-17983	Return Lane Flasher (2)
10	AE-27-1200	B-9362-R-4	Right Sling	21	AE-27-1200	A-20003	Top Kickout
11	AE-26-1200	A-9415-2	Bottom Jet	22	---	---	Not Used



## SOLENOID/FLASHER LOCATIONS (continued)



Item No.	Coil/Flasher No.	Assy. Number.	Description
23	24-8704	A-17803	Save Post Flasher
24	24-8704	A-17983	Trap Door Flasher
	24-8704	A-17803	
25	24-8802	---	Spirit Ring Flasher
	24-8704	A-17983	
26	24-8802	---	Saw Flasher
	24-8704 (2)	A-17903	
27	24-8802	---	Jet Flasher
	24-8704 (2)	A-17803	
28	24-8802 (2)	---	Box Flasher
	24-8704	A-17983	
33	20-10197	A-19778	Cube Magnet
34	AE-27-1200	A-19934	Sub Ball Release
35	20-10197	---	Left Drain Magnet

### General Illumination Circuits

Item No.	Description	Bulb No.	
01	String 1	#555	G.I. String 1
02	String 2	#555	G.I. String 2
03	String 3	#44	G.I. String 3
04	String 4	#44	G.I. String 4
05	String 5	#44	G.I. String 5

### Flipper Coils .

Coil No.	Color	Assy. No.	Description
FL-11629	(blue)	A-15849-R-2	Lower Right Flipper
FL-11629	(blue)	A-15849-L-2	Lower Left Flipper

24-6549 = #44 bulb  
 24-8704 = #89 bulb  
 24-8768 = #555 bulb  
 24-8802 = #906 bulb

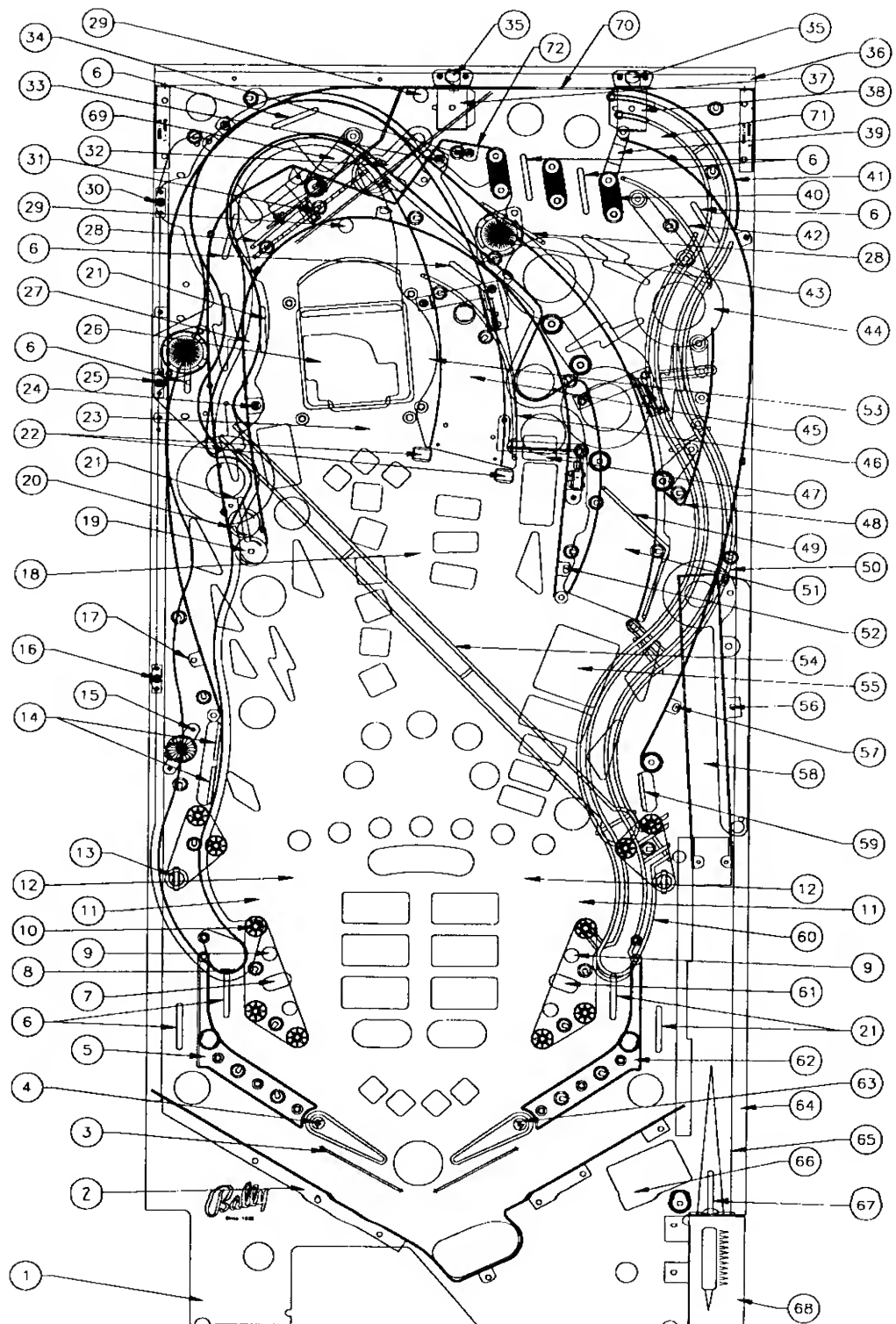
## UPPER PLAYFIELD PARTS

Item No.	Part Number	Description	Item No.	Part Number	Description
1	01-9211	Playfield Hanger Bracket	41	04-10035	Ball Guide #9
2	01-13638	Bottom Arch Ball Guide	42	12-7265	Wireform Ball Guide #3
3	12-7210	Rebound Wireform (2)	43	A-20063-2	Playfield Plastic Assembly
4	A-15849-L-2	Flipper Assembly Complete	44	A-9415-2	Jet Bumper Coil Assembly
	20-9250-5	Flipper & Shaft, White		B-9414-3	Jet Bumper Assy., Red Wafer
5	A-20064-2	Flipper Ball Guide Assy., Left		B-12030-2	Jet Bumper Leaf Switch Assy.
6	A-17813	Rollover Switch Assembly		23-6710-1	Clear Tubing
7	A-17811	Sling Shot Kicker Assembly		03-8254-12	Jet Bumper Cap, Orange
	B-9362-L-3	Coil & Bracket Assembly	45	A-19955	Left Plastic Ramp Assembly
	10-128	Kicker Spring	46	12-7267	Wireform Ball Guide #7
8	01-13892.1	Ramp Guard	47	A-20063-3	Playfield Plastic Assembly
9	A-17801	Kicker Count Switch Assembly	48	01-13819	Ball Guide #10
10	02-4250-20	Spacer, 6-32 x 1 1/4"	49	12-7266	Wireform Ball Guide #4
11	A-17064	*Inductor & Eddy Sensor Cable	50	A-20063-4	Playfield Plastic Assembly
	A-18543-1	*Generic Eddy Sensor P.C.B.	51	A-19954	Right Plastic Ramp Assembly
12	A-15257	*Bracket & Pole Piece Assembly	52	04-10034	Ball Guide #8
	20-9612	*Wave Spring Washer	53	A-16120	*D.C. Motor Control Assembly
	20-10197	*Coil Magnet with Bracket	54	A-19959	Crossover Wire Ramp Assy.
13	02-5107	Adjusting Post (2)	55	A-19938	Scoop Assembly Complete
14	A-18059-15	Rect. Stationary Target, Orange		A-19939	Plate Assembly Complete
15	A-20063-1	Playfield Plastic Assembly	56	02-4568-6	Post 8-32 x 3 3/4"
16	02-4250-20	Spacer, 6-32 x 1 1/4"	57	04-10032	Ball Guide #2
	A-12258-1	6-32 Nut Plate	58	A-20048	Shooter Ramp Assembly
17	04-10033	Ball Guide #6	59	A-17799-6	Round Stationary Target, Yellow
18	A-19825	*Trough Assembly	60	A-19958	Right Wire Ramp Assembly
19	04-10005	Newton Ball Assembly	61	A-17811	Sling Shot Kicker Assembly
20	20-6500	Steel Ball 1 1/16"		B-9362-R-4	Coil & Bracket Assembly
21	A-17813-1	Rollover Switch Assembly		10-128	Kicker Spring
22	A-20014-5	Oblong Stationary Target, White	62	A-20064-1	Flipper Ball Guide Assy., Right
23	A-19237	*Eddy Coil P.C.B. Assembly	63	A-15849-R-2	Flipper Assembly Complete
24	02-4250-40	Spacer, 6-32 x 2 1/2"		20-9250-5	Flipper & Shaft, White
25	02-4250-44	Spacer, 6-32 x 2 3/4"	64	A-15802-P	Level & Holder Assembly
	A-12258-1	6-32 Nut Plate	65	01-10621	Strike Plate
26	A-19778	Magic Trunk Assembly	66	A-19963	Ball Trough Assembly Complete
	A-19782	Magic Trunk Motor Assembly	67	A-18973	Shooter Lane Switch Assembly
	A-19791	Front Trough Assembly	68	31-1009-50039	Screened Ball Shooter
	A-20029	Trunk and Light w/Cable	69	A-19002	Ball Gate Assembly
	03-9317	Magic Trunk	70	A-19968	Mirror Assembly
27	A-18543-2	*Generic Eddy Sensor P.C.B.	71	A-20063-5	Playfield Plastic Assembly
28	12-7268	Wireform Ball Guide #7	72	04-10031.1	Ball Guide #1
29	A-17932	Disappearing Post Assembly			
30	02-4250-20	Spacer, 6-32 x 1 1/4"	<b>NOT SHOWN:</b>		
	02-4250-24	Spacer, 6-32 x 1 1/2"		A-15576	*Opto SW7 P.C.B.
	A-12258-1	6-32 Nut Plate		A-17812-2	*Cable Mounting Bracket, 1/2"
31	A-19942	Complete Saw Assembly		A-17812-4	*Cable Mounting Bracket, 1"
32	A-10417	Micro Switch Assembly		A-13204-50039	Bottom Arch Assembly
	A-17985-R	Eject Switch Assembly		03-9351-1	**Full Playfield Mylar
	A-20003	Eject Assembly		03-9351-2	Playfield Mylar
33	02-4250-24	Spacer, 6-32 x 1 1/2"		03-9351-3	Playfield Mylar
34	02-4250-42	Spacer, 6-32 x 2 5/8"		36-50039	Screened Hardcoat Playfield
35	A-17796	Ball Gate Actuator Coil Assy.			
36	A-19811	Back Panel Assembly			
37	A-20086	Coil Actuated Ball Gate Assy.			
38	A-17797-1	Special Ball Gate Assy., Left			
39	A-20102	Ball Gate & Wire Assembly			
40	03-8318-12	Double Sided Hood, Orange			

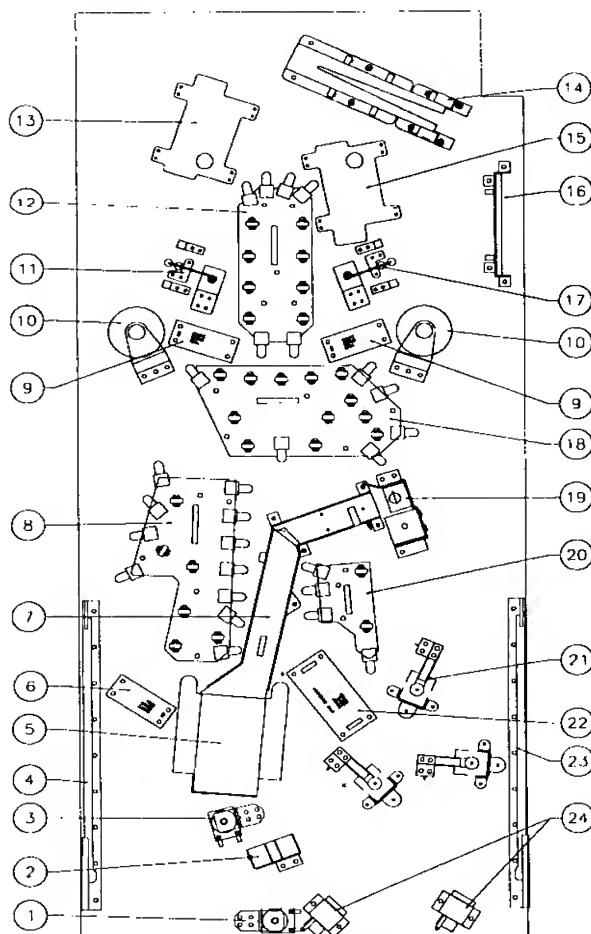
\*Located under playfield.

\*\*The Theatre of Magic hardcoat playfield does not require a full mylar. However, mylars can be purchased through your local Bally Distributor.

## UPPER PLAYFIELD PARTS



## LOWER PLAYFIELD PARTS



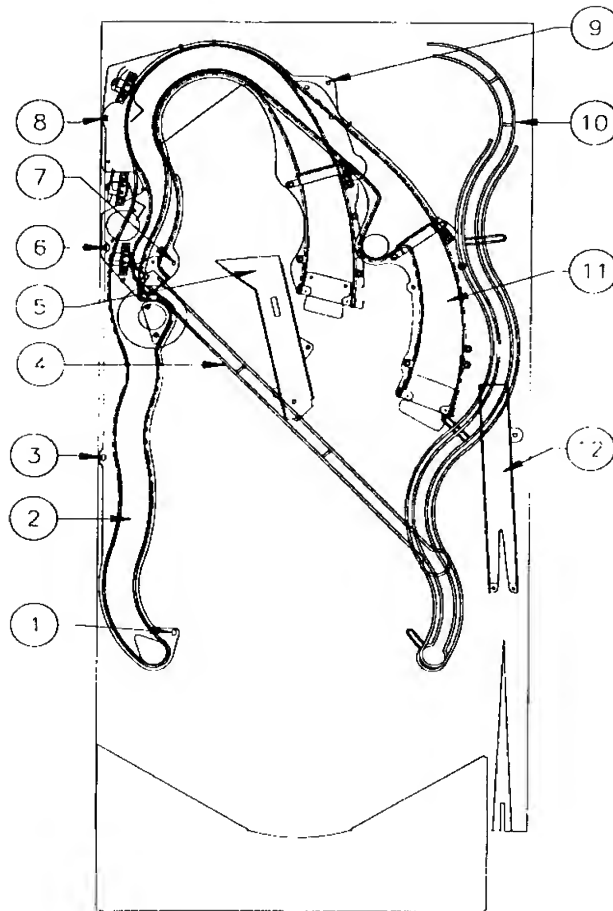
**Item No.    Part Number    Description.**

- |    |             |                            |
|----|-------------|----------------------------|
| 1  | A-17932     | Disappearing Post Assy.    |
| 2  | A-20003     | Eject Assembly             |
| 3  | A-17932     | Disappearing Post Assy.    |
| 4  | A-17749.1-1 | Playfield Slide Assy. Left |
|    | 10-439      | Slide Spring               |
| 5  | A-19778     | Magic Trunk Assembly       |
|    | A-19782     | Magic Trunk Motor Assy.    |
|    | A-19791     | Front Trough Assembly      |
| 6  | A-18543-2   | Generic Eddy Sensor Bd     |
|    | A-20036     | Magic Eddy Coil P.C.B.     |
| 7  | A-19825     | Trough Assembly            |
| 8  | A-19983     | 17 Lamp P.C.B. Assy.       |
| 9  | A-17064     | Ind. & Eddy Sensor Cable   |
|    | A-18543-1   | Generic Eddy Sensor Bd.    |
| 10 | A-15257     | Brkt & Pole Piece Assy.    |
|    | 20-9612     | Wave Spring Washer         |
|    | 20-10197    | Coil Magnet w/Bracket      |
| 11 | A-17811     | Sling Shot Kicker Assy.    |
|    | B-9362-L-3  | Coil & Bracket Assembly    |
|    | 10-128      | Spring                     |

**Item No.    Part Number    Description.**

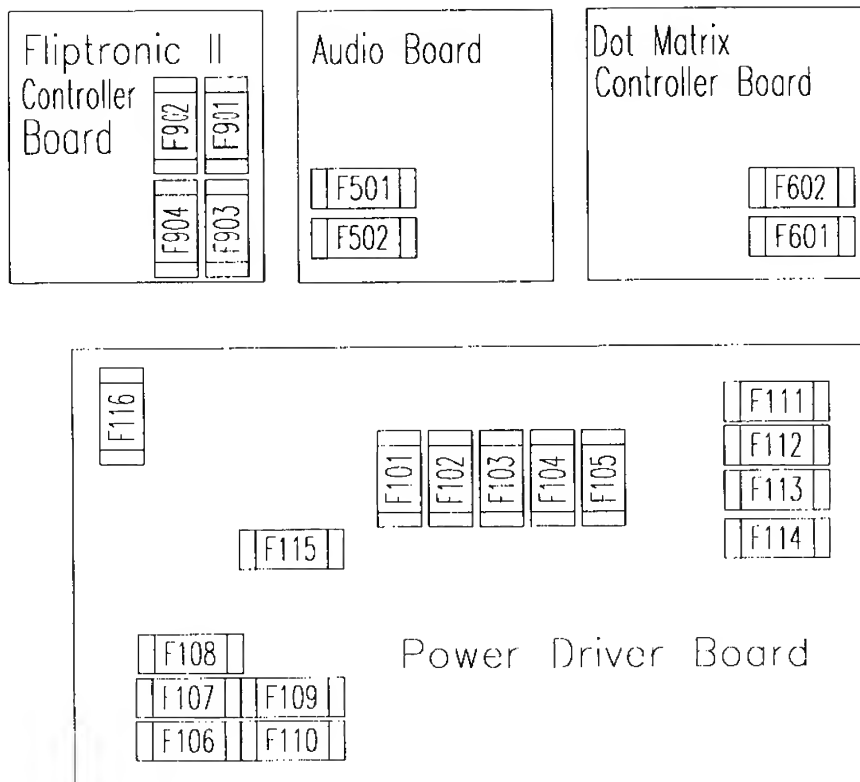
- |    |             |                             |
|----|-------------|-----------------------------|
| 12 | A-19981     | 14 Lamp P.C.B.              |
| 13 | A-15849-L-2 | Flipper Assembly Comp.      |
| 14 | A-19963     | Ball Trough Assy. Comp.     |
| 15 | A-15849-R-2 | Flipper Assembly Comp.      |
| 16 | A-15576     | Opto SW7 P.C.B.             |
| 17 | A-17811     | Sling Shot Kicker Assy.     |
|    | B-9362-R-4  | Coil & Bracket Assembly     |
|    | 10-128      | Spring                      |
| 18 | A-19982     | 18 Lamp P.C.B.              |
| 19 | A-19939     | Plate Assembly Comp.        |
| 20 | A-19984     | 6 Lamp P.C.B.               |
| 21 | A-9415-2    | Jet Bumper Coil Assy. (3)   |
|    | B-12030-2   | Jet Bumper Sw. Assy. (3)    |
| 22 | A-16120     | D.C. Motor Control P.C.B.   |
| 23 | A-17493.1-2 | Playfield Slide Assy. Right |
|    | 10-439      | Slide Spring                |
| 24 | A-17796     | Ball Gate Actuator Assy.    |

## RAMPS



Item No.	Part Number	Description.	Item No.	Part Number	Description.
1	20-4250-20	6-32 x 1 1/4" Spacer	6	02-4250-44	6-32 x 2 3/4" Spacer
2	A-19954	Right Ramp Assembly	7	02-4250-40	6-32 x 2 1/2" Spacer
	03-9336.1	Right Ramp	8	02-4250-20	6-32 x 1 1/4" Spacer
	01-13849	Left Guard		02-4250-24	6-32 x 1 1/2" Spacer
	01-13850	Right Guard	9	02-4250-24	6-32 x 1 1/2" Spacer
	A-20037	Bracket & Switch Assembly	10	A-19958	Right Wire Ramp Assy.
	5647-12693-13	Sub Mini Switch Assembly		12-7262.2	Wire Ramp
	A-14265-13	Receptacle & Skt. Clear		5647-12693-13	Sub Mini Switch Assembly
	03-8171-10	Mini Dome, Blue	11	A-19954	Right Plastic Ramp Assy.
	03-8063-6	Light Sleeve, Yellow		03-9337.2	Plastic Ramp
3	20-4250-20	6-32 x 1 1/4" Spacer		A-20046	Brkt. & Switch Gate Assy.
4	A-19959	Crossover Ramp Assy.		01-13849	Left Guard
	12-7263.2	Wire Ramp		01-13850	Right Guard
	A-19779	Diverter Magnet Assembly		5647-12693-13	Sub Mini Switch Assembly
5	A-19825	Trough Assembly	12	A-20048	Shooter Ramp Assy.
	03-9324.1	Plastic Ramp			
	A-12238	Sub Mini Switch Assembly			

## Fuse List



### **Audio Board**

F501 -25V Circuit 3A, 250V, S.B.  
F502 +25V Circuit 3A, 250V, S.B.

### **Dot Matrix Controller Board**

F601 +62V Circuit 3/8A, 250V, F.B.  
F602 -113V and -125V Circuits 3/8A, 250V, F.B.

### **Fliptronic II Controller Board**

F901 Upper Right Flipper 3A, 250V, S.B.  
F902 Upper Left Flipper 3A, 250V, S.B.  
F903 Lower Right Flipper 3A, 250V, S.B.  
F904 Lower Left Flipper 3A, 250V, S.B.

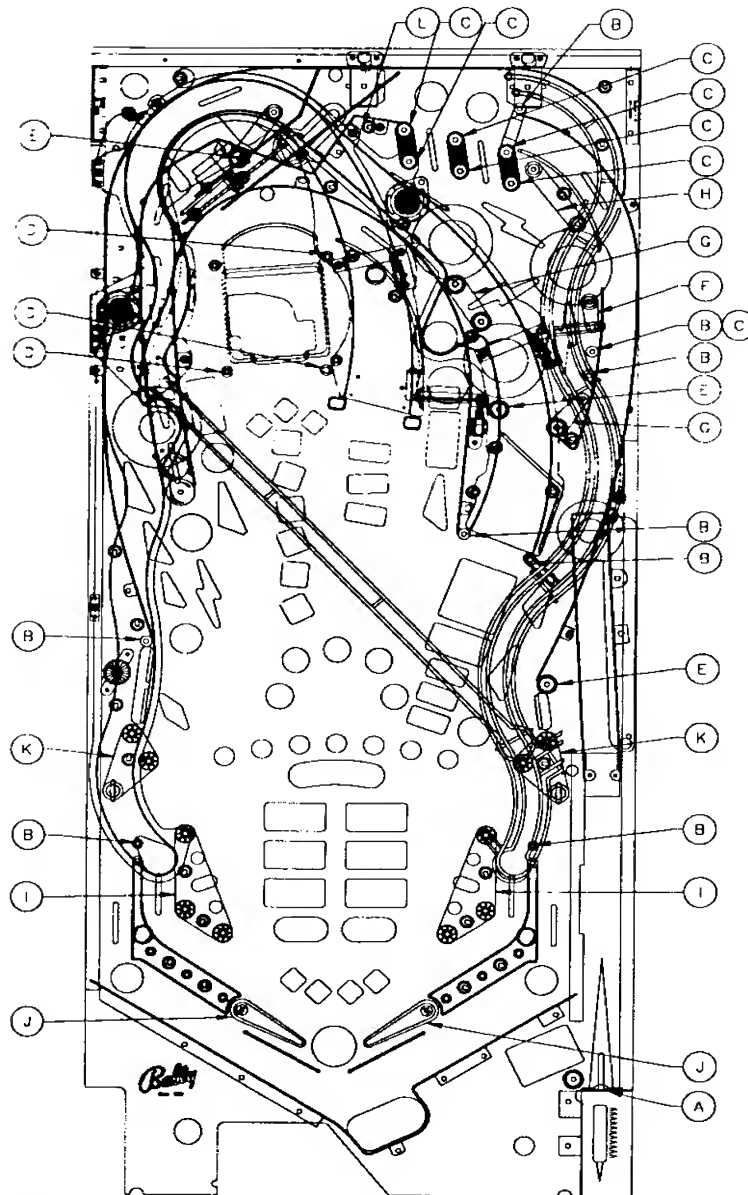
### **Power Driver Board**

F101 +50VDC General (Left Flipper) 3A, 250V, S.B.  
F102 +50VDC General (Right Flipper) 3A, 250V, S.B.  
F103 Solenoid #25-#28 3A, 250V, S.B.  
F104 Solenoid #9-#16 3A, 250V, S.B.  
F105 Solenoid #1-#8 3A, 250V, S.B.  
F106 G.I. #5 Wht-Vio 5A, 250V, S.B.  
F107 G.I. #4 Wht-Gm 5A, 250V, S.B.  
F108 G.I. #3 Wht-Yel 5A, 250V, S.B.  
F109 G.I. #2 Wht-Org 5A, 250V, S.B.  
F110 G.I. #1 Wht-Brn 5A, 250V, S.B.  
F111 Flasher Secondary 5A, 250V, S.B.  
F112 Solenoid Secondary 7A, 250V, S.B.  
F113 +5V Logic 5A, 250V, S.B.  
F114 +18V Lamp Matrix 8A, 32V, N.B.  
F115 +12V Switch Matrix 3/4A, 250V, F.B.  
F116 +12V Secondary 3A, 250V, S.B.

### **Line Filter**

Domestic Game 8A  
Foreign Game 5A, S.B.

## RUBBER RINGS



Item No.	Part Number	Description.	Qty	Item No.	Part Number	Description.	Qty
A	23-6327	Ball Shooter Tip	1	G	23-6694-6	Rubber Ring 1"	4
B	23-6556	Black Sleeve	8	H	23-6694-8	Rubber Ring 1 1/2"	1
C	23-6641	Rubber Bumper .64 od	7	I	23-6694-10	Rubber Ring 2 1/2"	2
D	23-6694-1	Rubber Grommet 3/32"	3	J	23-6695	Flipper Ring 1 1/2"	2
E	23-6694-3	Rubber Ring 5/16"	6	K	23-6694-9	Rubber Ring 2"	2
F	23-6694-5	Rubber Ring 3/4"	1	L	23-6553-4	Flipper Rubber, Red	1

## WARNINGS & NOTICES

### **WARNING**

**FOR SAFETY AND RELIABILITY**, substitute parts and equipment modifications are not recommended. Use of Non-BALLY parts or modifications of game circuitry, may adversely affect game play, or may cause injuries.

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CABLE HARNESS PLACEMENTS and ground strap routing on this game have been designed to keep RF radiation and conduction within levels accepted by the FCC Rules.

TO MAINTAIN THESE LEVELS, reposition harnesses and reconnect ground straps to their original placements, if they become disconnected during maintenance.

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**FOR SERVICE...**  
CALL your authorized  
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